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EXAMINER

RAMPURIA, SATISH

ART UNIT	PAPER NUMBER
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2191

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/872,085

Applicant(s)

HUNT ET AL.

Examiner

Satish S. Rampuria

Art Unit

2191

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***DETAILED ACTION***

1. This action is in response to the RCE filed on 05/23/2005.

1. Claims cancelled by the applicant: 4.

2. New claims added by the Applicants: 34-36.

3. Claims amended by the applicant: 1-3 and 5-22.

2. Claims 1-3 and 5-36 are pending.

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/23/2005 has been entered.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2191

5. Claims 1-3, 5-6, 12-16, 19-29 and 34-36 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5951680 to Redlin et al. (hereinafter, Redlin).

**Per claim 1:**

Redlin discloses:

- launching an object-oriented application of a computer containing a plurality of factory objects operable to create objects (col. 2, lines 49-52 “New object creation... for new objects”);
- creating by a cache factory object of a plurality of cache factory objects under control of the application (col. 2, lines 49-53 “New object creation... “home object” (factory object)”) a cache object that provides an interface between the application and a cache having a plurality of objects (col. 4, lines 4-8 “data... object interface... communicate... object interface”);
- configuring the cache object by the application (col. 2, lines 44-46 “new object... configured... using a “configurator object””);
- associating a factory object of the plurality of factory objects with the cache object by the application (col. 4, lines 62-64 “container includes a cache table...at any given time”);
- and
- cooperatively operating, by the factory object and the cache object, to manipulate one or more objects contained in the plurality of cache objects in response to a request from the application (col. 7 to 8, lines 64-67 and 1-35. Also, see FIG. 4 and related discussion).

Art Unit: 2191

**Per claim 2:**

The rejection of claim 1 is incorporated, and further, Redlin discloses:

- wherein the cache object contains a plurality of methods to add an object to the cache, remove an object from the cache, and find an object in the cache (col. 9, lines 26-30 “...existing object... removed from memory... recreate... object assembly... client object”).

**Per claim 3:**

The rejection of claim 1 is incorporated, and further, Redlin discloses:

- wherein the cacheable factory objects contains a plurality of methods to get an object from the cache, and to couple the cache object to the cacheable factory object (See FIG. 5 and related discussion).

**Per claim 5:**

The rejection of claim 1 is incorporated, and further, Redlin discloses:

- wherein the factory objects contains a plurality of methods to create an object, obtain an object identifier, and get a database connection object (col. 5, lines 15-19 “factory object... includes methods...create new objects... through client interface...”).

Art Unit: 2191

**Per claim 6:**

The rejection of claim 1 is incorporated, and further, Redlin discloses:

- wherein the factory objects and the cache objects derive from a common base object (col. 7, lines 47-61).

**Per claim 12:**

The rejection of claim 1 is incorporated, and further, Redlin discloses:

- wherein the application interacts with the factory object to manipulate the one or more objects located in the plurality of cache objects (col. 7 to 8, lines 64-67 and 1-35. Also, see FIG. 4 and related discussion).

**Per claim 13:**

The rejection of claim 12 is incorporated, and further, Redlin discloses:

- wherein manipulating the one or more objects further comprises adding one or more objects to the cache objects (col. 7 to 8, lines 64-67 and 1-35. Also, see FIG. 4 and related discussion).

**Per claim 14:**

The rejection of claim 13 is incorporated, and further, Redlin discloses:

- the application sending a message to the cacheable factory object of the plurality of cacheable factory objects to add the one or more objects to the cache object coupled to

Art Unit: 2191

the cacheable factory object (col. 7 to 8, lines 64-67 and 1-35. Also, see FIG. 4 and related discussion);

- the cacheable factory object receiving the message and sending a message to the cache object to add the one or more objects to the cache coupled to the cache object (col. 7 to 8, lines 64-67 and 1-35. Also, see FIG. 4 and related discussion).

**Per claim 15:**

The rejection of claim 12 is incorporated, and further, Redlin discloses:

- wherein manipulating the one or more objects further comprises removing one or more objects from the cache objects (col. 9, lines 26-30 "...existing object... removed from memory... recreate... object assembly... client object").

**Per claim 16:**

The rejection of claim 15 is incorporated, and further, Redlin discloses:

- the application sending a message to a cacheable factory object of the plurality of cacheable factory objects to remove the one or more objects located in the cache object coupled to the cacheable factory object (col. 7 to 8, lines 64-67 and 1-35. Also, see FIG. 4 and related discussion).
- the cacheable factory object receiving the message and sending a message to the cache object to remove the one or more objects from the cache coupled to the cache object (col. 7 to 8, lines 64-67 and 1-35. Also, see FIG. 4 and related discussion).

Art Unit: 2191

**Per claim 19:**

The rejection of claim 12 is incorporated, and further, Redlin discloses:

wherein manipulating the one or more objects further comprises locating one or more objects from the cache objects (col. 7 to 8, lines 64-67 and 1-35. Also, see FIG. 4 and related discussion).

**Per claim 20:**

The rejection of claim 19 is incorporated, and further, Redlin discloses:

- the application sending a message to the cacheable factory object to locate the one or more objects located in the cache object coupled to the cacheable factory object (col. 5, lines 27-32 “present invention... use the findByPrimaryKeyString() method to locate an existing object in a container or recreate an object that has been passivated or previously removed from memory.”);
- the cacheable factory object sending a message to the cache object determining whether any of the one or more objects are contained in the cache object (See FIG. 5 and related discussion);
- if able to locate the one or more objects, the cache object returning any of the one or more objects contained in the cache object (See FIG. 5 and related discussion); and
- if unable to locate the one or more objects, the cacheable factory object accessing the one or more objects from a database, and adding the one or more objects to the cache object (See FIG. 5 and related discussion and col. 5, lines 15-19 “factory object... includes methods...create new objects... through client interface...”).



Art Unit: 2191

**Per claim 21:**

The rejection of claim 12 is incorporated, and further, Redlin discloses:

- wherein manipulating the one or more objects further comprises identifying which of the one or more objects contained in the cache object is not the same as the corresponding one or more objects contained in a database (col. 7 to 8, lines 64-67 and 1-35. Also, see FIG. 4 and related discussion).

**Per claim 22:**

Redlin discloses:

- one or more factory objects, coupled to an object-oriented application of a computer and operable to create objects usable during run-time of the application (col. 2, lines 49-52 “New object creation... for new objects”);
- one or more cacheable factory objects operating under the control of the application (col. 2, lines 44-46 “new object... configured... using a “configurator object””); and
- one or more cache objects created by the one or more cacheable factory objects under control of the application (col. 2, lines 49-53 “New object creation... “home object” (factory object)”), associated with one or more corresponding factory objects by the application and operable to provide an interface between the one or more factory objects and a cache having a plurality of objects (col. 4, lines 4-8 “data... object interface... communicate... object interface”),
- wherein after the application configures the one or more cache objects and associates each factor object of the one or more factory objects (col. 2, lines 49-53 “New object

Art Unit: 2191

creation... “home object” (factory object)”) with a corresponding one of the one or more cache objects created a factory object of the one or more factory objects (col. 4, lines 4-8 “data... object interface... communicate... object interface”) and a corresponding cache object of the one or more cache objects are cooperatively operable to manipulate one or more objects contained in the plurality of cache objects of the cache in response to a request from the application (col. 7 to 8, lines 64-67 and 1-35. Also, see FIG. 4 and related discussion).

**Per claim 23:**

The rejection of claim 22 is incorporated, and further, Redlin discloses:

- wherein the object-oriented application interacts with the plurality of cacheable factory objects in order to manipulate one or more objects contained in the plurality of cache objects (col. 7 to 8, lines 64-67 and 1-35. Also, see FIG. 4 and related discussion).

**Per claim 24:**

The rejection of claim 22 is incorporated, and further, Redlin discloses:

- a plurality of objects contained in the one or more cache objects can be uniquely identified (col. 7, lines 48-50 “newly created object... unique to container...”).

Art Unit: 2191

**Per claim 25:**

The rejection of claim 22 is incorporated, and further, Redlin discloses:

- wherein the plurality of cache objects contain a plurality of methods to add an object to the cache, remove an object from the cache, and find an object in the cache (col. 9, lines 26-30 "...existing object... removed from memory... recreate... object assembly... client object").

**Per claim 26:**

The rejection of claim 22 is incorporated, and further, Redlin discloses:

- wherein the plurality of cacheable factory objects contain a plurality of methods to get an object from a cache, and to couple a cache object to a cacheable factory object (See FIG. 5 and related discussion).

**Per claim 27:**

The rejection of claim 22 is incorporated, and further, Redlin discloses:

- wherein the plurality of cacheable factory objects derive from a corresponding plurality of factory objects (col. 2, lines 49-53 "New object creation... "home object" (factory object)... creating the managed object... new objects").

Art Unit: 2191

**Per claim 28:**

The rejection of claim 22 is incorporated, and further, Redlin discloses:

- wherein the plurality of factory objects contain a plurality of methods to create an object, obtain an object identifier, and get a database connection object (col. 5, lines 15-19 “factory object... includes methods...create new objects... through client interface...”).

**Per claim 29:**

The rejection of claim 22 is incorporated, and further, Redlin discloses:

- wherein the plurality of factory objects and the plurality of cache objects derive from a common base object (col. 7, lines 47-61).

**Per claim 34:**

The rejection of claim 1 is incorporated, and further, Redlin discloses:

- wherein associating the factory object with the cache object allows any object created by the factory object to use the cache object. The limitations in the claims are similar to those in claim 1, and rejected under the same rationale set forth in connection with the rejection of claim 1.

**Per claim 35:**

The rejection of claim 1 is incorporated, and further, Redlin discloses:

- wherein after associating the factory object with the cache object, the application directly requesting an object of the one or more objects contained in the cache object by sending a

Art Unit: 2191

get message to the factory object. The limitations in the claims are similar to those in claim 20, and rejected under the same rational set forth in connection with the rejection of claim 20.

**Per claim 36:**

The rejection of claim 1 is incorporated, and further, Redlin discloses:

- wherein each factory object of the plurality of factory objects may interface with the cache through a plurality of corresponding cache objects created by the plurality of cache factory objects. The limitations in the claims are similar to those in claim 1, and rejected under the same rational set forth in connection with the rejection of claim 1.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 7-9, 10-11, 17-18, 30-33 rejected under 35 U.S.C. 103(a) as being unpatentable over Redlin in view of US Patent No. 6,446,188 to Henderson et al., (hereinafter, Henderson).

**Per claims 7, 8, 30 and 31:**

The rejection of claim 1 is incorporated, and further, Redlin does not explicitly disclose plurality of cache statistics objects contain a plurality of methods to determine the number of cache accesses, the number of times a cache access returned an empty result, the size of a cache, and a

Art Unit: 2191

reset command and wherein configuring the cache object further comprises the application configuring one or more of the plurality of methods.

However, Henderson discloses in an analogous computer system a plurality of cache statistics objects contain a plurality of methods to determine the number of cache accesses (col. 3, lines 11-14 “the system comprises an object cache for caching frequently accessed memory”), the number of times a cache access returned an empty result, the size of a cache, and a reset command and wherein configuring the cache object further comprises the application configuring one or more of the plurality of methods (col. 3, lines 7-10 “A system for dynamic memory management maps a sparsely populated virtual address space of memory objects to a more densely populated physical address space of fixed size memory elements for use by a host processor” and col. 8, lines 13-17 “Management registers... provide... data for the DMC... registers contain information... address translation module... the management module 404... contain results of host processor commands”).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of keeping track of cache as taught by Henderson into the method of caching of components of factory objects as taught by Redlin. The modification would be obvious because of one of ordinary skill in the art would be motivated to keep track of cache to manage systems require memory resources as suggested by Henderson (col. 2, lines 42-65).

Art Unit: 2191

**Per claims 9 and 32:**

The rejection of claim 7 is incorporated, and further, Redlin does not explicitly disclose wherein the plurality of cache configuration objects contain a plurality of methods to empty a cache, set and get a maximum cache size, and set and get the cache type and wherein configuring the cache object further comprises the application configuring one or more of the plurality of methods.

However, Henderson discloses in an analogous computer system the plurality of cache configuration objects contain a plurality of methods to empty a cache (col. 8, lines 21-22 “the number of free entries in the management table cache”) set and get a maximum cache size (col. 8, lines 19-20 “The permanent registers 512 contain information such as the maximum size of a memory object”), and set and get the cache type wherein configuring the cache object further comprises the application configuring one or more of the plurality of methods (col. 8, lines 23-24 “a pointer to the next free entry in the management table cache”).

The feature of accessing cache would be obvious for the reasons set forth in the rejection of claims 7 and 8, respectively.

**Per claims 10 and 17:**

The rejection of claims 1 and 16 is incorporated, respectively, and further, Redlin does not explicitly disclose setting a cache type for the cache object; setting a maximum size for the number of objects contained in the cache object.

However, Henderson discloses in an analogous computer system setting a cache type for the cache object (col. 8, lines 41-43 “The initialize process sets the DMC (Dynamic Memory Cache) and associated private memory to a known state” and col. 7, lines 35-36 “The object

Art Unit: 2191

cache 406 provides a fast local memory used to store frequently accessed memory element data”); setting a maximum size for the number of objects contained in the cache object (col. 7, lines 63-65 “FIG. 5 also shows an example of three dynamically allocated memory objects of varying size added after DMC initialization”).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of setting cache type and setting a maximum size for the number of object as taught by Henderson into the method of caching of components of factory objects as taught by Redlin. The modification would be obvious because of one of ordinary skill in the art would be motivated to keep track of cache to manage systems require memory resources as suggested by Henderson (col. 2, lines 42-65).

**Per claim 11:**

The rejection of claim 10 is incorporated, and further, Redlin discloses:

- wherein the cache type for the cache object determines how each object in the cache is removed from the cache (col. 9, lines 26-30 “...existing object... removed from memory... recreate... object assembly... client object”).

**Per claim 18:**

The rejection of claim 17 is incorporated, and further, Redlin discloses:

- wherein the cache type for the cache object determines how each object in the cache is removed from the cache (col. 9, lines 26-30 “...existing object... removed from memory... recreate... object assembly... client object”).



Art Unit: 2191

**Per claim 33:**

The rejection of claim 30 is incorporated, and further, Redlin discloses:

- wherein the plurality of cache statistics objects and the plurality of cache configuration objects derive from the common base object (col. 7, lines 47-61).

***Response to Arguments***

8. Applicant's arguments with respect to claims has been considered but are moot in view of new ground(s) of rejection.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Satish S. Rampuria** whose telephone number is **(571) 272-3732**. The examiner can normally be reached on **8:30 am to 5:00 pm** Monday to Friday except every other Friday and federal holidays. Any inquiry of a general nature or relating to the status of this application should be directed to the **TC 2100 Group receptionist: 571-272-2100**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Tuan Q. Dam** can be reached on **(571) 272-3695**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Art Unit: 2191

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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07/25/2005



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